

Top 10 Logistics Training Principles Drive Product Support Shop Equipment Condition Prediction Status

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Deploying DoD weapons systems requires focused efforts by all stakeholders to ensure logistics resources are available to support the Fleet introduction to include funding, spares, tools, support equipment, information systems support, and training. The summit was primarily built to maximise communication, elevate problems, and arrive at solutions. DoD aircraft have unique maintenance and support structure, and new platforms are usually unlike existing fleet components.

It takes patience to provide DoD with services to make sure all equipment shows up where they can use it. DoD contracting officials must make determinations of good supply schedule order deals for equipment and product support/repair services.

At the core of every successful aircraft repair shop is one simple, obvious similarity—one aspect of operations that can never be overlooked: quality repairs.

That's the bottom-line, price-of-admission expectation from customers in increasingly competitive markets. Repairs have to be accurate, correct and on time, or else nothing else you do matters.

You can overcome a lot of things, but that's one thing that you can't. It's a lot easier said than done, though, as proper, consistent repairs require the right tooling, equipment and training to keep up with aircraft requirements that are always changing.

Problems can pop up during issuance or use of a policy, procedure, solicitation provision, written contract section, method, or practice of conducting acquisition actions of any kind at any stage of the acquisition process that is inconsistent with DoD Rules.

DoD design of the Logistics Modernisation Programme system has been a challenge encountering problems with the functionality to identify receiving and invoice documents in addition to sensor status updated stored in another system. DoD staff could not identify the amounts of customer transactions in capital working fund for inventory items returned for repair.

Result comes from ineffectively performed discovery and corrective action phase activities of the fiscal operating space related to capital fund inventory business processes. Specifically, DoD did not: 1) detail standard operating procedures, flowcharts, and narratives describing inventory business processes; 2) identify the key positions that needed to be contacted to identify, maintain, and provide key supporting documentation for the transactions associated with inventory processes; and 3) create corrective action plans to remediate known documentation and sensor deficiencies.

There have been, more than a few cases in which the Defense Department has sunk up to 10-figure sums into enterprise information technology systems with little to show for it. On the other hand, there are examples like the Logistics Modernisation Programme, in which the DoD has already saved more money by implementing the system than what it's spent so far and what it will cost to keep it going for the next decade.

DoD said the system, which helps manage the workflow of the sprawling maintenance and manufacturing network overseen by Materiel Command eliminated costs to maintain outdated systems and also cut expenditure of "spare" parts DoD doesn't actually need.

The plan was simple, yet thorough. Every training programme must have a clear goal in mind. For our shop, it's about maintaining a high level of competency and having all technicians on staff working toward or having achieved advanced certification.

The budget can vary greatly depending on shop locations and requirements, but it is important to take into account what options at a location are to be picked up by the shop on a case-by-case basis depending on the programmes in motion and availability of training hours.

"It has let us make the right decisions on divesting our inventory. We're still providing the right parts where soldiers need them.. "Some of that was linking together what had been our legacy systems to get a clear picture of what our inventory posture is on any given day.

DoD must have visibility into contracting processes so that we can see when new procurements are going to be delivered, when the items that are out for repair are going to come back, when all of the items that are in transit are going to be delivered to our customers. An item manager at, let's say, Tank System Research, Development and Engineering Center can see the worldwide status of all of logistics assets in one place."

The current iteration extends the enterprise resource planning system functionality to tens of thousands more users, most of whom are front-line artisans and machinists rather than the high-level officials who had mostly used the system for budgeting and planning, "We're now taking these capabilities to streamline and automate our business processes down to the shop floor in support of detailed repair/production activities involved several million transactions a day."

Much of that work is happening via the recent deployment of mobile devices distributed to workers at DoD depots across the country, replacing paperwork with tablets and barcode scanners to specify and then document each turn of a screw on a helicopter, truck, tank or many other aircraft.

This means creating an organisation focused on continuous improvement, building dynamic shops where mechanics focused on bettering themselves in order to push the unit forward on its consistent growth pattern.

But how do you get the technicians on your staff to want training? For some people, it's automatic, but what about the rest of your team? How do you create that type of organisation?

"Before, if you were at the DoD depot and you were taking apart a Blackhawk helicopter for an

overhaul, that was all done manually: the engine goes through various work centers, the rotor blades go somewhere else, and a lot of people touch those components and use a lot of new parts before it comes back together into a Blackhawk at the end

You can imagine the stack of paper as that process goes on. We've eliminated that with automated technologies so all the labour, the parts consumed, the financials that link to all of that are all linked so you only have a couple pieces of paper moving around with barcodes that link back to all this information.

It's always been a great place to work. It's always been a unit that invested in itself, from equipment to training. We are very proud of the fact that through all the changes, we have created a really good reputation. In competitive markets, you are measured by that reputation. It's so important, and you can lose it in a hurry, too.

Longevity is valued for individuals in the unit. Some mechanics are proof of that. So, if the shop transitions from one function to another, it's not just a matter of hiring on new technicians. It is essential to re-equip and retrain the team in place.

DoD has reduced costs and those reductions are reflected in the new services contract pilot programme to improve the maintenance of Stryker combat vehicle. The pilot eventually involved 300 vehicles or about 10 percent of the Stryker fleet. So the new contract also includes more use of machine learning.

First up, is expanding the Stryker work beyond the pilot. There is a growing focus on prevention when it comes to vehicle and fleet maintenance fit with multiple sensors collecting real-time structured/unstructured information on vehicle performance. Across the fleet machines integrate information to predict what maintenance needs to be done and when.

The idea is to better plan where material is located and how it is distributed and transported, including how to ship materials around the world determines if it better to go by sea, rail or aircraft, for example. The scope of work is broad "from research to customer service.

We've always been lucky that Site Visit Executive has been extremely dedicated to making sure we have the most up-to-date equipment. The organisation has also always subsidised training costs for technicians, offering numerous opportunities each year through regional associations, suppliers and parts distributors.

It goes back to quality of repairs. We want to make sure every repair for every aircraft is correct, and to do that, we need to be as up-to-date on training as possible. It wasn't that no one was motivated. We had a number of technicians who really put in the effort, but those were people who were already passionate about training and improving. The problem is, how do you get those who are uninterested in training to improve?

DoD must use operational information relayed from predictive sensors to make better repair decisions and be more efficient. DoD has entered into service contracts to address its logistical challenges, which include administration of military bases and facilities, and coordinating transit

of personnel and vehicles.

DoD is moving beyond infrastructure as a service and embracing platform service, adopting commercial capabilities to further enhance DoD readiness. DoD cannot conduct tomorrow's operations using yesterday's processes and procedures emphasising understanding the leading indicators to readiness, and getting in front of the many logistics challenges by providing improved training to increase coordination and efficiency of operations.

Service contract will enable DoD to predict vehicle maintenance failures from billions of historical and real-time input points of on-board sensors directly from military assets to better understand the condition of its vehicles and predict mission-critical failures to enable intervention.

By stopping failures before they happen, DoD will realise significant savings, increase prioritisation of resources, efficiency, and provide key intelligence around logistics, asset service life product support, technical advice, assistance to soldiers, and provides asset visibility for timely and proactive decision-making when it comes to top priority – readiness.

We had to work with our parts suppliers to pick up as many training options as possible. The shop purchases some packages to be performed in house, it signs up techs for workshops at multiple locations. Site Visit Executive compiles schedules of all available training and makes them available to leadership.

It's difficult to truly gauge technician motivation levels within the organisation, but as far as the success of training programmes, there are a few useful metrics. Each shop is different, making it difficult to give exact numbers that describe technical improvements within the team.

Site Visit Executive has overhauled technician advancement structure and it is now predicated on training and education. Techs are assigned designations based upon certification levels. Each level has different bonuses that techs can advance through depending on their amount of training hours completed during time period. Each technician training hours workloads are monitored closely, and Site Visit Executive convenes regular review meetings with each team member.

In addition to moving toward predictive maintenance models, DoD is taking advantage of machine learning capabilities to provide faster insights into recommended fixes, based on input information of equipment details, ie, model, version, configuration, controller so DoD can execute equipment status/conditions tests and prescribed repair procedures, repair resolution, operational procedures, tooling, expertise, and evidence utilising insights to provide probability-ranked guidance regarding diagnostic and resolution options or next best action recommendations to help preempt or resolve correlated failures.

Technology is always changing so DoD must strive to keep up the pace and always stay one step ahead of the competition by speeding application modernisation. This has never been more true and DoD is marching forward to the technology of the future, which revolves around predictive/cognitive intelligence to enhance readiness by anticipating requirements for DoD to run hundreds of military bases, as well as coordinate the movements of thousands of troops and

equipment.

DoD must deliver cutting-edge operational/business intelligence and tools to provide unprecedented logistics support at efficient and affordable means provides on-time integrated logistics support of worldwide operations, impacting every soldier, every day.

As someone who has played a large part in growth of success rates in the training programme, Site Visit Executive takes a lot of pride in the staying power of shop functions, no matter what the mission, focusing on maximising service performance at each location, while continuing to offer field units an experience they can't get elsewhere.

And that starts with quality repairs.

That's the absolute starting point if your shop is going to be successful. Everything starts there. That's where you build your reputation, and that's where you earn the trust of leadership.

Many times, you don't get a second chance with a customer. We can't afford to take those chances. We want to be as ready as possible for every aircraft that comes in our shops. We have proven we're on the right path to doing that.

1. Can the maintenance process be made more efficient for determination of condition/function reporting, transit, work load assign?
2. Are there any substantial delays in the repair process?
3. Can sustainment planning and demand forecasting be more accurate and efficient through the introduction of performance incentives?
4. Is the supply support strategy satisfying Warfighter requirements?
5. Can the supporting supply line be made more efficient through the introduction of performance incentives?
6. Are there any substantial delays in the procurement process for spare parts or new units?
7. Are there any significant inventory build-ups at any stage in the supply line or are parts no longer made available?
8. What is the scope of opportunity for repair teams to get access to system technical specs?
9. Does the available contract mechanism not conflict and allow for a long-term performance-based arrangement?
10. Is it the right time for a change in sustainment strategy with enough time remaining to benefit from emerging technology and the logistics business model?